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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,734	10/03/2005	Roland Callens	05129-00103-US	4319
23416 7590 08/10/2007 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899			EXAMINER YOUNG, SHAWQUIA	
			ART UNIT 1626	PAPER NUMBER
			MAIL DATE 08/10/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/551,734

Applicant(s)

CALLENS ET AL.

Examiner

Shawquia Young

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-35 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/30/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-35 are currently pending in the instant application. Applicants have added new claims 19-35 in an amendment filed on May 29, 2007.

I. **Information Disclosure Statement**

The information disclosure statement (IDS) submitted on May 29, 2007 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

II. **Response to Arguments**

Applicant's arguments, filed May 29, 2007 with respect to the rejections of claims 1-18 under 35 USC 112, first paragraph as lacking enablement and written description and 35 USC 112, second paragraph as being indefinite; and the objection of claim 7 because of minor informalities have been fully considered and are partially persuasive. The objection of claim 7 has been withdrawn.

Applicants traverse the rejection of claims 18 under 35 USC 112, first paragraph, as lacking enablement and written description and 35 USC 112, second paragraph as being indefinite. Applicants have amended the independent claim 1 to read "Process for producing amino acid derivatives *which can be obtained by periodate oxidation, ozonolysis or Baeyer-Villiger oxidation of an unsaturated group,...*". Simply adding the following phrase "*which can be obtained by periodate oxidation, ozonolysis or Baeyer-Villiger oxidation of an unsaturated group*" does not explain what amino acid derivatives are encompassed by Applicants' invention. Applicants are still not enabled for the

Art Unit: 1626

independent claim 1 because it encompasses derivatives of various amino acids that are not discussed in Applicants' original disclosure. Applicants are enabled for the specific amino acids that were listed as examples in the specification on page 5 (lines 10-14). Therefore, the Examiner has maintained the rejections.

Upon further examination of the current amendments to the claims, a new ground(s) of rejection is made in view of claims 19-35 under 35 USC 112, first paragraph, as lacking enablement and written description and 35 USC 112, second paragraph as being indefinite.

III. *Rejection(s)*

Claim Rejections - 35 USC § 112, 1st paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 20-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The "amino acid derivatives" of Claims 20-35 are not defined in the specification so as to know the structures of the compounds

Art Unit: 1626

that are included and/or excluded by the term. Therefore, the specification lacks adequate support for Claims 20-35.

Claims 20-35 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for preparing several amino acid derivatives (See pages 5-13 of the specification), does not reasonably provide enablement for preparing all amino acid derivatives selected from β , γ , δ or ϵ -amino acids. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

As stated in the MPEP 2164.01 (a), "There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue."

In In re Wands, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have need described. They are:

1. the nature of the invention,
2. the state of the prior art,
3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,
6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

In the instant case

The nature of the invention

Art Unit: 1626

The nature of the invention is a process of preparing amino acid derivatives selected from β , γ , δ or ϵ -amino acids.

The state of the prior art and the predictability or lack thereof in the art

It is the state of the prior art that the term "derivative" found in the claims is defined as a compound, that is formed from a similar compound or a compound that can be imagined to arise from another compound, if one atom is replaced with another atom or group of atoms (<[http://en.wikipedia.org/wiki/Derivative_\(chemistry\)](http://en.wikipedia.org/wiki/Derivative_(chemistry))>).

The predictability or lack thereof in the art is that derivatives contain a structural radical similar to that from which it is derived.

The amount of direction or guidance present and the presence or absence of working examples

The only direction or guidance present in the specification and the only working examples present in the specification are for producing seven specific amino acid derivatives and the organic amines used as starting materials as described on pages 5-13 of the applicants instant specification. Derivatives are not defined in the instant specification.

The breadth of the claims

The breadth of the claims is a process for producing amino acid derivatives selected from β , γ , δ or ϵ -amino acids.

The quantity of experimentation needed and the level of the skill in the art

While the level of the skill in the pharmaceutical art is high, the quantity of

Art Unit: 1626

experimentation needed is undue experimentation. One of skill in the art would need to prepare compounds with similar structural radicals without any direction as to what structural radical is needed and how different the derivative can be from any of the amino acids or organic amines.

The level of skill in the art is high without showing or guidance as to how to make other derivatives it would require undue experimentation to figure out the starting materials, solvents, temperatures and reaction times that would provide other derivatives or organic amines.

Claim Rejections - 35 USC § 112, 2nd paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 20, applicant is claiming a process of producing amino acid derivatives selected from β , γ , δ or ϵ -amino acids. Furthermore, the term "derivative" in claims 20-35 renders the claims indefinite as the term "derivative" found in the claims is a compound, usually organic obtained from another compound by a simple chemical process or an organic compound containing a structural radical similar to that from which it is derived. Also, there are 20 standard amino acids that contain structurally different functional groups and it is unclear which amino acids applicants are claiming derivatives of. Therefore, the term "derivative"

Art Unit: 1626

found in the claims renders the claims indefinite because the two terms are not defined as to know the metes and bounds of the claims.

IV. Objections

Dependent Claim Objections

Dependent Claim 19 is also objected to as being dependent upon a rejected based claim. To overcome this objection, Applicant should rewrite said claims in an independent form and include the limitations of the base claim and any intervening claim.

V. Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

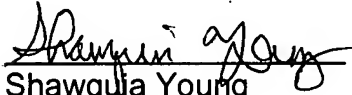
Art Unit: 1626

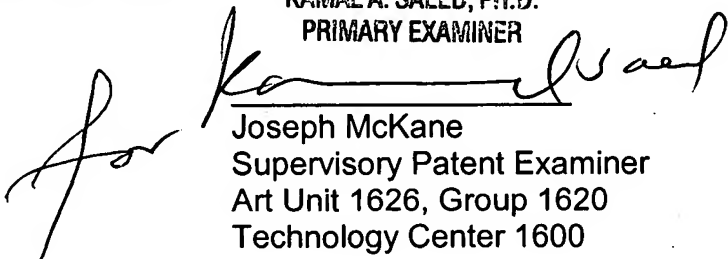
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawquia Young whose telephone number is 571-272-9043. The examiner can normally be reached on 6:00 AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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